# VOLUME 30 CONTENTS

## Vol. 30, No. 1


| | | |
|---|---|---|
| **P. Fazio, Srinivasa Reddy Mallidi** and **D. Zhu** | 1 | A quantitative study for the measurement of driving rain exposure in the Montréal region |
| **J. C. Burgess** | 13 | Air pressure equalization in rainscreened joints by geometric alteration |
| **S. Selvarajah** and **A. J. Johnston** | 19 | Water permeation through cracked single skin masonry |
| **A. C. Fischer-Cripps** and **R. E. Collins** | 29 | Architectural glazings: design standards and failure models |
| **A. C. Fischer-Cripps, R. E. Collins, G. M. Turner** and **E. Bezzel** | 41 | Stresses and fracture probability in evacuated glazing |
| **R. A. Behr** | 61 | On-site investigations of spandrel glass micro-environments |
| **L. Khemlani** | 73 | GENWIN: a generative computer tool for window design in energy-conscious architecture |
| **P. R. Tregenza** | 83 | Mean daylight illuminance in rooms facing sunlit streets |
| **M. S. Imbabi** and **A. Musset** | 91 | The Monymusk hybrid solar heating and ventilation project |
| **W. B. Mugridge** and **J. G. Hosking** | 99 | Towards a lazy, evolutionary common building model |
| **J. A. Swaffield** and **D. P. Campbell** | 115 | The simulation of air pressure propagation in building drainage and vent systems |
| **E. Mundt** | 129 | Displacement ventilation systems—convection flows and temperature gradients |
| **A. Säämänen, I.-M. Andersson, R. Niemelä** and **G. Rosén** | 135 | Assessment of horizontal displacement flow with tracer gas pulse technique in reinforced plastic plants |
| **Siew-Ann Tan, Boon-Hwee Low** and **Tien-Fang Fwa** | 143 | Data reduction for $k$ and $\alpha$ from transient heating of slab |
| **Erratum** | 153 | |


## Vol. 30, No. 2


| | | |
|---|---|---|
| | | *Obituary* |
| **E. Mathews** | 155 | Christopher Barrie Wilson: A man of many qualities |
| **I. Aravot** | 157 | Toward a broader basis for analysis in urban planning and design |
| **L. Lutton** | 165 | HYPEREX—a generic expert system to assist architects in the design of routine building types |
| **P. Manning** | 181 | Environmental design as a routine |
| **N. N. Dawood** | 197 | Scheduling in the precast concrete industry using the simulation modelling approach |
| **M. A. Wilson, W. D. Hoff** and **C. Hall** | 209 | Water movement in porous building materials—XIII. Absorption into a two-layer composite |
| **M. A. Wilson, W. D. Hoff** and **C. Hall** | 221 | Water movement in porous building materials—XIV. Absorption into a two-layer composite ($S_A < S_B$) |

| | | |
|---|---|---|
| **D. Zhu, S. Reddy Mallidi** and **P. Fazio** | 229 | Approach for urban driving rain index by using climatological data recorded at suburban meteorological station |
| **D. A. Kagi** and **K. B. Ren** | 237 | Reduction of water absorption in silicate treated concrete by post-treatment with cationic surfactants |
| **E. A. Adam** and **P. J. Jones** | 245 | Thermophysical properties of stabilised soil building blocks |
| **P. Tuomaala** and **J. Rahola** | 255 | Combined air flow and thermal simulation of buildings |
| **T. Stathopoulos** and **Y. S. Zhou** | 267 | Numerical evaluation of wind pressures on flat roofs with the $k$–$\varepsilon$ model |
| **P. Smith Schneider, J.-J. Roux** and **J. Brau** | 277 | Strategies for solving the air flow–thermal problem in multiroom buildings |
| **M. S. Sodha, S. P. Singh** and **R. L. Sawhney** | 287 | Evolution of design patterns for direct evaporative coolers |
| **L. E. Ekberg** | 293 | Concentrations of $NO_2$ and other traffic related contaminants in office buildings located in urban environments |
| **Sunil Kumar** and **C. V. S. Kameswara Rao** | 299 | Fire load in residential buildings |
| **Announcements** | 307 | |


## Vol. 30, No. 3


| | | |
|---|---|---|
| **M. G. Davies** | 309 | Solutions to Fourier's equation and unsteady heat flow through structures |
| **D. Faulkner, W. J. Fisk** and **D. P. Sullivan** | 323 | Indoor airflow and pollutant removal in a room with floor-based task ventilation: results of additional experiments |
| **I. S. Walker** and **T. W. Forest** | 333 | Field measurements of ventilation rates in attics |
| **A. T. P. So, W. L. Chan, T. T. Chow** and **W. L. Tse** | 349 | New HVAC control by system identification |
| **A. D. Irving, S. J. M. Dudek, G. Warren** and **T. Dewson** | 359 | Estimating the thermal transport properties of building components |
| **B. M. Gibbs** and **R. D. Sullivan** | 367 | Sound insulation of brick diaphragm walls—II. Vibrational energy flow through the cross-ribs |
| **C. C. Ferguson, V. V. Krylov** and **P. T. McGrath** | 375 | Contamination of indoor air by toxic soil vapours: a screening risk assessment model |
| **J. C. Burgess** | 385 | Pressure equalised rainscreen joint modelling with the numerical model PERAM |
| **H. Rivard, C. Bédard, P. Fazio** and **K. H. Ha** | 391 | Functional analysis of the preliminary building envelope design process |
| **Naai-Jung Shih** | 403 | A general auto-index system for managing construction drawings |
| **D. P. Halsey, S. J. Dews, D. J. Mitchell** and **F. C. Harris** | 411 | Real time measurements of sandstone deterioration: a microcatchment study |
| **D. Butler** and **J. Payne** | 419 | Septic tanks: problems and practice |
| **E. H. Mathews, P. G. Richards, S. L. Van Wyk** and **P. G. Rousseau** | 427 | Energy efficiency of ultra-low-cost housing |
| **K. B. Ren** and **D. A. Kagi** | 433 | Upgrading the durability of mud bricks by impregnation |

**D. Pearlmutter** and **I. A. Meir** 441 Assessing the climatic implications of lightweight housing in a peripheral arid region

**Ben-De Qian** 453 A suggested international sunshine index for residential buildings

## Vol. 30, No. 4

**R. E. Collins, G. M. Turner, A. C. Fischer-Cripps, J.-Z. Tang, T. M. Simko, C. J. Dey, D. A. Clugston, Q.-C. Zhang** and **J. D. Garrison** 459 Vacuum glazing—a new component for insulating windows

**J.-M. Fürbringer** and **J. van der Maas** 493 Suitable algorithms for calculating air renewal rate by pulsating air flow through a single large opening

**J.-M. Fürbringer** and **C. A. Roulet** 505 Comparison and combination of factorial and Monte-Carlo design in sensitivity analysis

**Tianzhen Hong** and **Yi Jiang** 521 Stochastic weather model for building HVAC systems

**D. Zhu, S. Reddy Mallidi** and **P. Fazio** 533 Quantitative driving rain exposure on a vertical wall at various Canadian cities

**M. M. Samman** and **H. F. Erbatur** 545 Steel ratios for cost optimum reinforced concrete beams

**G. D. Holt, P. O. Olomolaiye** and **F. C. Harris** 553 A review of contractor selection practice in the U.K. construction industry

**I. A. Meir, D. Pearlmutter** and **Y. Etzion** 563 On the microclimatic behavior of two semi-enclosed attached courtyards in a hot dry region

**F. Falade** 573 An investigation of periwinkle shells as coarse aggregate in concrete

**A. Kumar, I. Masood, S. K. Agarwal** and **A. Kumar** 579 Studies on paper mill effluent as a workability aid for cement mortars

**M. Gorgolewski** 583 Optimising renovation strategies for energy conservation in housing

**J. M. Garcia de Miguel, L. Sanchez-Castillo, J. J. Ortega-Calvo, J. A. Gil** and **C. Saiz-Jimenez** 591 Deterioration of building materials from the Great Jaguar Pyramid at Tikal, Guatemala

**Announcement** 599

i Volume Contents and Author Index for Volume 30, 1995